

Public Service Commission of Wisconsin

Ave M. Bie, Chairperson Joseph P. Mettner, Commissioner Robert M. Garvin, Commissioner 610 North Whitney Way P.O. Box 7854 Madison, WI 53707-7854

May 23, 2001

RECEIVED

Mar 2 3 2001

Commissioners' Office

Re:

Investigation Into Ameritech Wisconsin's Unbundled Network

6720-TI-161

Elements

To Service List:

This is to acknowledge that Ameritech Wisconsin's 2001 Construction Plan offered into evidence by Public Service Commission of Wisconsin staff by letter dated April 11, 2001, will be admitted into the record as **Exhibit 136**; there having been no known objection to the admission of the exhibit by April 20, 2001, as staff's letter requested.

I apologize for not getting this notification out sooner.

Sincerely,

Jeffry J. Patzke

Administrative Law Judge

JJP:nea:x:\letter\6720-TI-161 admitting Exhibit 136

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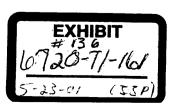
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Ameritech Wisconsin 2001 Construction Plan



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Section I Executive Summary

2001 Construction Plan Filing

Executive Summary:

Ameritech Wisconsin takes pride in the network it has in place to serve customers. It is truly state of the art. Yet, as technology marches forward, the pace of change and the availability of new technologies seem limitless. Ameritech has invested over \$1.3 billion in Wisconsin since 1995. During that time, significant changes in the network have taken place.

- Deployment of digital switches, all connected to the SS7 network, so that 100% of Ameritech's customers are now served by these technologies.
- Migration of the interoffice network to fiber facilities. As of the end of 1999, more than 99% of the DS1 circuits between Ameritech offices are on fiber facilities.
- Deployment of ISDN technology so that it is now available to over 90% of Ameritech's lines.
- Deployment of fiber optics to over 700 secondary school, college, library and hospital locations in Ameritech's territory.

As impressive as those changes were, Ameritech has a vision of the network for the future. It will be a network that can provide the means to serve the growing demand from all customers for broadband services.

That vision has:

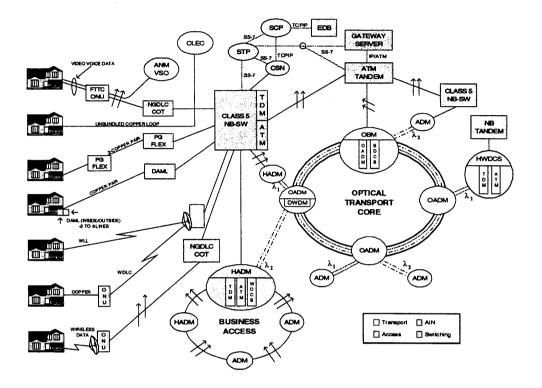
- Asynchronous Transfer Mode (ATM) switches, moving voice as packetized data through the core of the network.
- Interoffice circuits evolving to being optically, not electrically, interconnected hybrid network elements.
- Fiber optics going closer to customers while copper placements will decline in the feeder/distribution plant.

To move this vision forward, Ameritech Wisconsin plans to invest \$350 million in 2001. A portion of this will be for Project PRONTO, SBC's \$6 billion initiative to transform the network so that 80 percent of customers will be able to have access to broadband ADSL services.

Figure I-1 is a representation of the network for the future. The remainder of this report provides more details on the types of technologies that will be introduced over the next few years.

Figure I - 1

AMERITECH NETWORK ARCHITECTURE - FUTURE



Not all of these technologies will be placed in Wisconsin this year. In an effort to provide the Commission with the most complete information, we have included a description of technologies expected to be introduced over the next several years. Where available, specific information regarding placement in Wisconsin has been provided. As an aid to readers, a list of technical acronyms is provided in the appendix.

The report is comprised of four sections and an appendix: I) Executive Summary, II) Central Office, III) Interoffice Facilities and IV) Distribution Plant.

This is the second year that Ameritech has provided its report in this format. During the previous five years, 1995-1999, the report focused on the progress of Ameritech Wisconsin's infrastructure commitments made when moving to price regulation under Act 496. Those commitments were completed as of December 31, 1998. Thus, Ameritech provides the information enclosed in response to the Commission's order in docket 05-TI-174 dated June 22, 1999. In that order the Commission stated that Ameritech Wisconsin would be required to continue providing information on its construction plans.

Section II Central Office Equipment

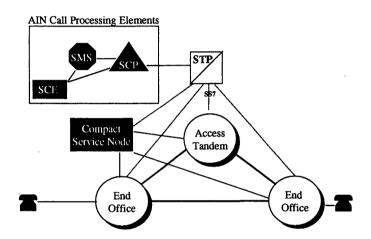
II. Central Office Equipment

In this section the plans to enhance the switching elements of Ameritech's network will be discussed. These elements include:

- End Offices (Class 5 switches)
- Tandem Switches
- Ameritech Intelligent Network (AIN) Platform
- Signaling System 7 Network

Figure II - 1

AMERITECH'S SWITCHING NETWORK



Ameritech's strategy in this area is to: 1) extend the economic life of the narrow-band end office switches and 2) position the network for the next generation packet based switches.

End Office (Class 5 switches)

Ameritech currently has 121 End Office switches, of which 48 are Remotes tied to host machines. All of these are digital switches. Ameritech continues to match the placement of switching machines to customers' needs. As service needs require, the growth of a switch or its replacement is initiated. In 2000 Ameritech replaced the existing Nortel DMS10 switch in the Sussex exchange with a Siemens EWSD stand-alone switch.

The strategy for extending the economic life of these switches consists of:

- 1) Implement services that move dial-up Internet traffic from the voice trunk network to other platforms.
- 2) Implement high-speed trunk interfaces at the STS-1, OC-3 and OC-12 rates to increase capacity.

3) Implement Telcordia (formerly BELLCORE) standard TR-303 for integrated digital loop carrier systems which moves the switch line interface and function closer to end users to leverage transport savings and reduce port costs.

Dial-up Internet Traffic

The challenge presented by the explosive increase in Internet traffic has been to manage switch module and trunk group growth. The call characteristics for Internet traffic is different from voice traffic in that the holding times are much longer. This requires the creation of additional talk paths, or trunks, in the interoffice network to meet the higher demand.

Two efforts are under way to migrate dial-up Internet traffic from the voice trunk network. The most ambitious is Project PRONTO, which will be discussed in section IV. It is the placement of the infrastructure elements necessary to allow the provisioning of ADSL service to 87% of Ameritech's lines in Wisconsin. The other project is to provide an upgraded service, called "Ensemble", to ISPs in the Southeast LATA.

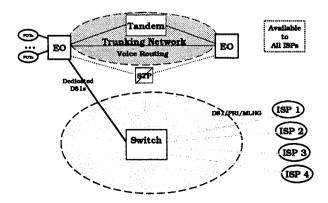
The Ensemble product was made available in the Southeast LATA in September 1999. As described in Ameritech's tariff:

Ensemble service will provide customers (ISPs) access to end users through an integrated hub in specific LATAs. Ameritech Ensemble is comprised of specific directory numbers and the Switched Redirect Network; a dedicated network of data optimized high usage one-way trunk groups to a centralized dedicated hub central office.

Ensemble customers (ISPs) can offer their end users, specific local directory numbers, which are routed over the Switched redirect Network (SRN), to the centralized hub. The ensemble customers will then receive their end users hubbed traffic via existing, tariffed Ameritech ISDN Prime Service.

Figure II - 2

EXTENDS THE LIFE OF THE CLASS 5



While it does not address all of the issues associated with Internet traffic, the Ensemble product does provide relief to tandem switches and other interoffice network elements.

High-Speed Trunk Interfaces

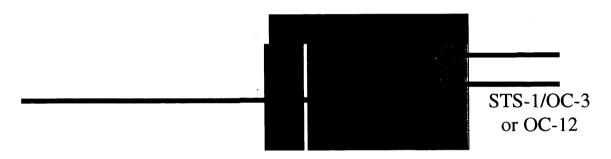
The second tactic being used to extend the economic life of the existing narrow-band End Office switches is to migrate the trunk connections from today's DS1 level to the STS-1 level (which is an electrical connection) and eventually to the OC-3 / OC-12 level (optical connection). Each STS-1 connection is equivalent to 28 DS1s.

Figure II – 3

EXTENDING THE LIFE OF THE CLASS 5

Implement high speed trunk interfaces STS-1, OC-3 (1999), OC-12 (2001)

- OC-3 eliminates Optical to Electrical conversion at offices equipped with WBDCS
- OC-3 /OC-12 provides 1+1 protection between Switch and IOF



Ameritech is in the process of implementing an OC-12 interface between the Hartford remote and Menomonee Falls host scheduled for completion in the 3rd quarter 2001.

Ameritech has already implemented the STS-1 connection in several switches from one of its vendors:

Milwaukee - Aetna Court Tandem

Milwaukee - Fairway Drive

Milwaukee - N. 26th Street (Ensemble switch)

Appleton

Green Bay - Jefferson Street

Madison - Main

The advantage of this change is that the quantity of trunks terminated on an individual switching module is almost double that of the existing method. This allows Ameritech to increase the number of connections to the switch without increasing the number of switch modules in the office. This is a valuable tool in offices with a large numbers of

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interconnections to CLEC switches, or in offices that require substantial trunk group increase due to Internet traffic growth.

During 2001 testing of STS-1 trunk connections will continue with a second switch vendor with implementation in that technology starting in 2002.

TR303 Integrated Digital Loop Carrier

Technical Reference TR-TSY-000303, often referred to as simply "TR303", describes Telcordia's view of the overall system functions and performance levels required for integrating a Digital Loop Carrier System (DLC) into a Local Digital Switch (End Office) at the DS1 transmission rate. What differentiates it from its TR008 predecessor is that TR303 addresses the need for enhancing the provisioning process for advanced services such as ISDN. It also provides for additional testing and service monitoring capabilities.

Figure II - 4

EXTENDING THE LIFE OF THE CLASS 5

 Implement TR-303 (2001) - Move the line interface and functions closer to the end user to leverage transport savings and reduce switch port costs.



Ameritech is in the process of implementing TR303 Integrated Digital Loop Carrier systems at the following locations in 2001:

Appleton

Milwaukee-Grange Ave.

Madison-Black Oak Madison-Sylvan

Tandem Switches

Ameritech currently has seven tandem switches in Wisconsin. Tandem switches provide the function of gathering traffic, local and toll, from end offices and delivering it to other service providers. This is referred to as the Access Tandem and Local Tandem functions. There is a local tandem in the Milwaukee exchange that acts as an alternative route for local calls in the metropolitan area.

Because of traffic growth, Ameritech Wisconsin has changed the function of the Local Tandem in the Milwaukee exchange to an Access Tandem function. The end result will be two Access Tandem's covering the Southeast LATA. This conversion is to be completed during the 4th Quarter 2001. Traffic growth in the Northeast and Southwest LATA's will trigger the placement of a 2nd Access Tandem in both LATA's with service planned for early 2002 and early 2003 respectively.

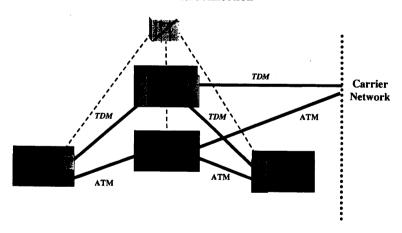
Initial plans were for this additional tandem capacity to be filled by an Asynchronous Transfer Mode (ATM) packet-based switch. However, testing on use of this technology in the voice network continues with our vendors. At this time the additional Access Tandem capacity is planned from digital circuit-switches.

Ameritech expects to see a significant change in the use of tandems in the near future. As part of SBC's Project PRONTO, field trials of ATM tandems are to begin in 2002 in Houston and Los Angeles.

Figure II - 5

NEXT GENERATION SWITCHING

· Provide ATM Interconnection



A significant part of Project PRONTO is SBC's plan to invest over \$700 million in a technology called Voice Trunking over ATM, or VTOA. VTOA involves the scheduled

and sequenced replacement of standard circuit-switched tandems with packet-based ATM switches within the core of the network. It's one of the first technologies being planned for wide deployment in order to make convergent voice and data networks practical. Once the field trials prove successful, the ensuing deployment would be one of the largest of its type. The convergence of voice and date backbones will significantly increase network efficiency and scalability by allowing SBC/Ameritech to transport voice traffic the same way as data – via – packets and the same level of call quality and reliability that today's network provides.

This is not simply a one-for-one replacement plan. The use of ATM switching allows for a distributive architecture, with a single switch consisting of multiple nodes in the network. As the distributive architecture matures SBC plans to convert existing tandems to ATM distributive tandems. This replacement could take place in the 2005-2006 timeframe.

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Section III Interoffice Transport

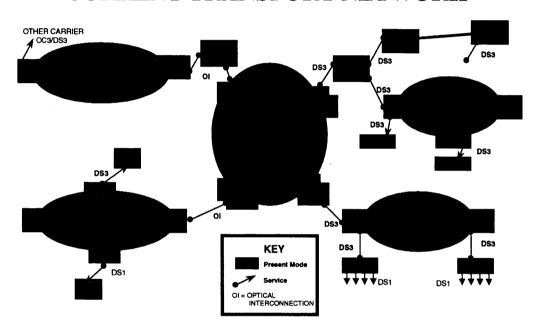
III. Interoffice Transport Network

In this section the plans to enhance Ameritech's transport network elements will be discussed. These elements include:

- Fiber based SONET transport
- Add/Drop Multiplexers
- Digital Cross-Connect Systems

Figure III - 1

CURRENT TRANSPORT NETWORK



Ameritech has upgraded its interoffice network such that over 99% of interoffice circuits are now on fiber facilities.

In 2001 three new routes are planned:

Appleton to Winneconne

Milwaukee Broadway to Milwaukee S. 26th Street

Watertown to Reeseville (Independent)

Ameritech's strategy in this area is to; 1) grow SONET networks and 2) increase core transport capacity.

SONET Networks

SONET networks have proven to be cost effective, manageable and reliable. As a transport architecture it has the advantages of survivability in a ring format, plus the flexibility of the add/drop multiplexing at node locations. It also provides for superior provisioning with its remote access capabilities.

Ameritech had 151 interoffice SONET rings in operation as of the end of 2000. Of those in operation, fourteen are "folded" rings, which means that the fiber route has no physical diversity. However, the SONET architecture does provide for diversity of the electronics. This means a backup exists should an electronic circuit board fail in the system.

Summarized below is the number of rings by their operating speed. Please note that this does not include SONET rings dedicated to single customers.

Interoffice SONET Rings 12-31-2000

Speed	Number	Central Offices Connected ¹
OC-3	6	10
OC-12	37	54
OC-48	108	80

At the end of 2000, all but three of the Ameritech offices in Wisconsin had some SONET technology for interoffice transport. At the end of 2001, only one office is expected to be without this technology.

Plans in 2001 are to add 70 SONET rings, involving 75 offices. Most of these will be operating at OC-48 level.

In an effort to grow SONET networks Ameritech plans to use the following tactics:

- Invest in survivable ring architectures
- Increase TITAN² Wide-band Digital Cross-Connects
- Introduce Bi-directional Loop Switched Rings
- Introduce OC-192 transport

Survivable Ring Architecture

As transport system capability increase, the need for survivable architectures intensifies. The risk of a significant outage increase and service quality will erode, if the survivability is not provided. Therefore Ameritech's planning goal is that any OC-192 and Dense

¹ Some duplication in office counts because some offices have more than one connection to SONET rings.

² TITAN is a registered trademark of Tellabs Inc.

Wave Division Multiplexing (DWDM) systems deployed will have physical fiber diversity. In addition, any OC-48 networks serving 48 switched DS3 equivalents or greater will have physical fiber diversity.

TITAN Deployment

Over the last few years Ameritech Wisconsin has installed 17 TITAN digital cross-connect systems (DCS). TITANs are the latest generation of DCSs and have superior service provisioning and monitoring capabilities.

Central offices with TITANs are:

Appleton Milwaukee – Aetna Court (2) Eau Claire Milwaukee – Broadway (2)

Green Bay – Jefferson St. Milwaukee – Fairway Drive

Green Bay – Ridge Milwaukee – Fond du Lac Avenue

Green Bay – Huth Milwaukee – N. 26th Street

Lake Geneva Racine – Main Madison – Main Waukesha

Madison - Kedzie

In 2001 Ameritech plans to grow six of the systems above and add a second TITAN at Milwaukee - Fairway Drive.

The TITAN digital cross-connect system is designed around a SONET-based platform. It currently supports 1/1, 3/1, 3/3 and SONET STS-1 functionality for today's network switching needs. The system also supports OC-3 and OC-12 point-to-point optical interfacing with other SONET network elements. Advantages of TITANs include: reduced equipment costs, reduced operations administration maintenance and provisioning costs, and improved maintainability and reliability of customer's networks

The TITAN system also provides a wide variety of digital cross-connect functions such as:

- Facility filling and grooming functions that allow dynamic bandwidth management of backbone transports. The TITAN system can replace manual cross-connect panels and stand-alone multiplexers, allowing software control of bandwidth routing.
- Control of direct DS1 connectivity between customer's premises and the public network backbone. This allows public service providers to offer end users dynamic bandwidth service.
- Flexible performance monitoring of DS1s, DS3s, STS-1s and DS1s within DS3s without affecting switch capacity.

Bi-directional Loop Switched Rings (BLSR)

Placement of this technology in the Ameritech network was approved in late 1999. At this time deployment in Wisconsin is under study. This configuration of SONET is more

efficient for distributed traffic, such as between other optical network elements or interhub arrangements. In a distributed traffic model, up to 30% more services can be provisioned than in the traditional Uni-directional Path Switched Ring (UPSR).

Figure III-2 shows the normal operations of this ring. Figure III-3 shows how the ring operates during a fiber cut.

Figure III - 2

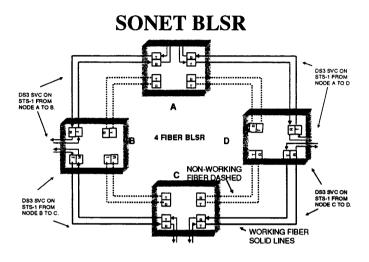
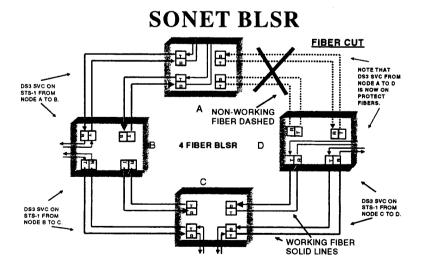


Figure III-3

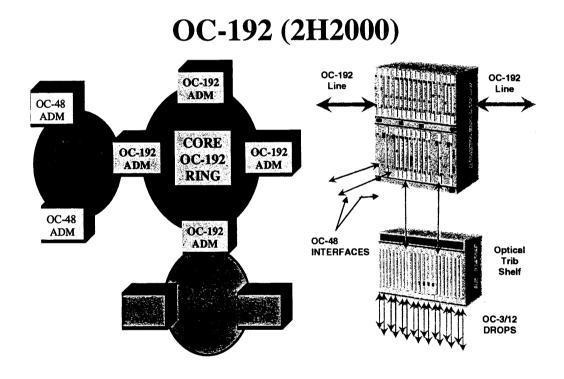


OC-192 Transport

OC-192 has proven to be a reliable transport in the Inter-exchange Carrier's networks and is expected to perform similarly in Ameritech's network. Currently the economics prove this to be a viable solution when the demand for DS3's is 80-84 or above. It may also be viable in situations where there is a need to recover use of fiber strands in a route for other applications, instead of deploying additional fiber.

Three 0:2 systems were deployed in Wisconsin in 2000. Ameritech presently plans to deploy 15 more 0:2 systems in Wisconsin during 2001.

Figure III - 4



Core Transport Capacity

Ameritech's second strategy is to increase the core transport capacity levels. This is achieved by making new transport solutions available to engineers. These include:

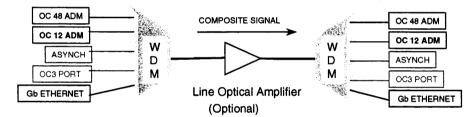
Fiber Optic Passive Wave Division Multiplexing (WDM) Fiber Optic Dense Wave Division Multiplexing (DWDM)

The introduction of these technologies enhances the capacity of fiber in the network. Wave Division Multiplexing is to fiber optics as T1 carrier system was to copper. It is combining multiple signals on a single fiber strand. The wavelength of the light source is what is unique to each signal.

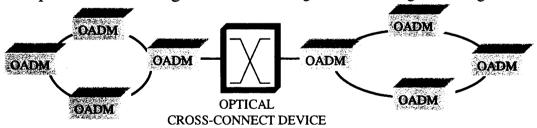
Figure III - 5

WDM AND OPTICAL NETWORKING OVERVIEW

WDM: Transport of multiple independent optical systems on a single fiber. Currently available between 2 and 40 channels per fiber.



Optical Networking: WDM + Rearrangeable Wavelength Routing.



Passive WDM

Passive Wave Division Multiplexing was available to be placed in the network in 1999. At this time there are no plans to place this technology in the Wisconsin network.

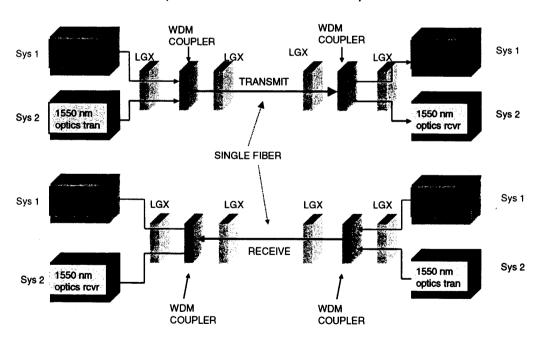
Passive WDM is an alternative to placing new fibers. It is economical for distances less than 25 miles. One of its advantages is that at these distances it requires no power, alarms and has no moving parts.

Passive WDM is not a substitute for fiber diversity. Figure III -6 is a representation of a Passive WDM system.

Figure III - 6

PASSIVE WDM

(UNI-DIRECTIONAL MODE SHOWN)



Dense WDM

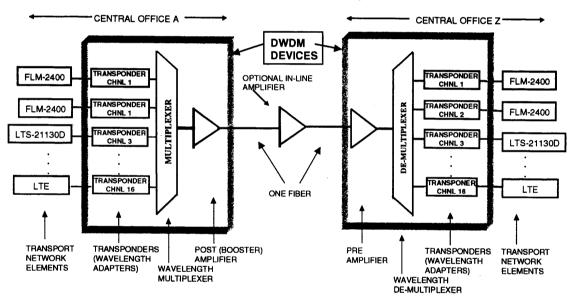
Dense WDM is another alternative when fiber reinforcement is needed. SBC is in the process of selecting an approved product for use in the network. At this time there are no plans to place this technology in the Wisconsin network.

Dense WDM is economical when relief involves significant infrastructure builds (conduit etc.), long distances between nodes and high channel growth rates.

Figure III - 7

DENSE WAVELENGTH DIVISION MULTIPLEXING

(ONE DIRECTION SHOWN)



- NOTES

 1. TRANSPONDERS ADAPT BROAD WAVELENGTHS USED BY TRANSPORT NETWORK ELEMENT TO THE TIGHT TOLERANCE WAVELENGTH USED BY THE DWDM SYSTEM.
- 2. TRANSPONDERS ALLOW OTHER VENDORS TRANSPORT NE'S INTERFACE WITH A DIFFERENT VENDORS DWDM SYS.

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Section IV Feeder/ Distribution

IV. Feeder / Distribution

The Feeder/Distribution network continues to evolve from a copper platform to a fiber – copper hybrid. As of the end of 2000, 19.2% of Ameritech Wisconsin's access lines in service were served via fiber-fed digital carrier systems.

Ameritech-Wisconsin's strategy in this area is to:

- Drive fiber closer to the customer
- Deploy a flexible full service platform
- Reduce new copper investments

The tactics to be used to meet these needs are: 1) Project Pronto and 2) the availability of a wireless Digital Loop Carrier solution for unique installations.

Project PRONTO

On October 18, 1999 SBC announced an initiative named Project PRONTO, which involves the company's entire 13-state in-region territory. Project PRONTO is designed to transform SBC into a broadband service provider capable of meeting customer needs for data, voice and video products. SBC plans to invest more than \$6 billion over three years in fiber, electronics and ATM technology in order to create a robust data-centric broadband network architecture. As required by the FCC's merger order, advanced data services, including ADSL, will be provided to customers through a separate subsidiary. In Wisconsin, the subsidiary is Ameritech Advanced Data Services (AADS). However, the vast majority of the investment to provide the underling infrastructure will be made, and owned, by Ameritech Wisconsin.

Of the \$6 billion that SBC plans to invest, 75 percent will be directed towards improvements to the basic local loop infrastructure (i.e., fiber feeder and next-generation remote terminals). The local exchange companies (i.e., Ameritech Wisconsin) will own this investment. The remaining 25% will fund other infrastructure improvements, especially in the tandem and interoffice network. This was discussed in section II and is referred to as Voice Trunking Over ATM (VTOA).

One element of Project PRONTO is deployment of next-generation remote terminals, which are designed to eliminate loop length and network condition limitations, thus providing broadband capability to more than 87 percent of customer locations within Ameritech Wisconsin's service territory.

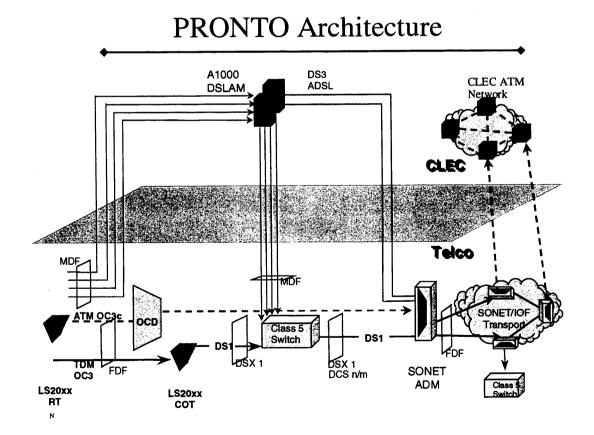
Project PRONTO will deploy an advanced, highly flexible, next-generation digital loop carrier (NGDLC). The sites where the NGDLC will be deployed are referred to as "neighborhood gateways" or remote terminals. NGDLC uses single-mode fiber and employs the synchronous optical network (SONET) signal format as the transmission medium between nodes. The selected access platform provides the following features:

Support of POTS and xDSL services, currently ADSL.

- Ability to transport and groom signals from Telcordia standard TR-008-compliant systems.
- Support of OC3 SONET transport between nodes
- Software control of system administration, provisioning, operations and maintenance.
- Support for Telcordia standards TR-057, TR-008, and GR-303 switch interfaces.

The neighborhood gateways to be used in Wisconsin are Alcatel's Litespan 2000/2012. They will be installed to effectively shorten copper loops for DSL to less than 12 Kft. from the remote terminal. OC-3s will be utilized to transport data from the RT to the Central Office. A separate, dedicated OC-3 will be used for data and an OC3 for voice. In the central office, the incoming data OC-3 will terminate in an Optical Concentration Device (OCD). The OCD aggregates many incoming OC-3s from multiple remote terminals to a smaller number of outbound OC-3 or DS3 facilities. Additionally, the OCD routes packetized data traffic to the appropriate ATM network based upon packet routing addresses. New Element Management Systems are being deployed to manage these network elements (AMS for the Litespan and NaviScore/LARIAT for the OCD).

Figure IV - 1



The corporation is making an effort to ensure that this information is available to all members of the industry. Information on the initial wire center deployment and remote

terminals scheduled for upgrade/deployment can be found on SBC's web site: https://clec.sbc.com/.

In Wisconsin there are 59 wire centers currently scheduled for Project PRONTO deployment. They are located in the following exchanges:

Appleton(except	Hubertus	Milwaukee (all	Pewaukee
Greenville remote)	Hartland	except: Park Place &	Parkside
Beloit	Jackson	Brookfield Lakes remotes)	Port Washington
Cedarburg	Janesville	Menomonee Falls	Racine (all)
De Pere	Kenosha (all except	Menomonie	River Falls
Eau Claire (except	Pleasant Prairie remote)	Muskego	Sheboygan
Altoona remote)	Lake Geneva	Neenah	Stevens Point
Fond du Lac	Madison (all)	North Lake	West Bend
Green Bay (all except Cardinal Lane)	Manitowoc	Oconomowoc	Waukesha (except
except Cardinal Lane)	Merton	Oshkosh	Riverwood & Swenson
		O Gimio Gii	Dr. remote)

These exchanges represent over 87% of the access lines Ameritech Wisconsin serves.

In Wisconsin Project PRONTO involves the upgrade of over 350 existing Litespan remote terminals and the placement of almost 500 additional Litespan units. Included in the Appendix at page 30 is a list of the remote terminal's currently activated to provide ADSL service. This information is based on reports for Ameritech Wisconsin from the SBC web site as of March 28, 2001. The web site's information will be updated frequently throughout 2001.

As shown in Figure IV-1 above the PRONTO architecture requires the use of an optical concentration device (OCD) to gather the data streams from the remote terminals. Thus far Ameritech has turned up twenty-one OCDs. Their locations are shown on page 29 in the Appendix.

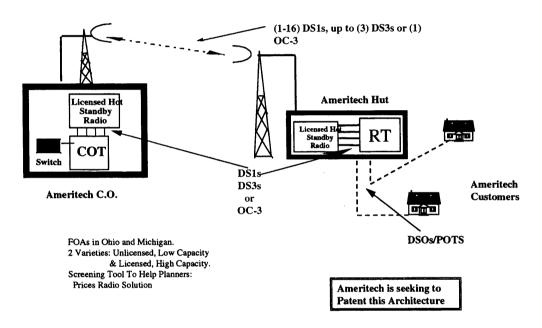
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Wireless Digital Loop Carrier

Wireless digital Loop Carrier (WDLC) is a low cost strategic solution to provide capacity when the application demands the quicker deployment of Digital Loop Carrier, or right-of-way issues will prohibit a traditional solution. Ameritech currently is field testing this application in Ohio and Michigan. There are no plans to place this technology in the Wisconsin network at this time. However, if an application that meets the parameters is presented, use of this technology will be considered.

Figure IV - 2

WIRELESS DLC - WDLC



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Acronyms

ADSL	Asymmetrical Digital Subscriber Line
AIN	Ameritech Intelligent Network
ATM	Asynchronous Transfer Mode, cell based transport & switching
BDCS	Broadband (3/3) Digital Cross-connect System
BLSR	Bi-directional Line Switched Ring (SONET ring restoration)
BRX	Broadband Transceiver
COT	Central Office Terminal
CSN	Compact Service Node
DAML	Digital Added Main Line – Carrier system supporting up to 6 POTS
	channels
DS3 UNI	DS3 User-Network Interface, ATM cell formatted DS3
DSLAM	Digital Subscriber Line Access Multiplexer, ADSL CO Mux
DWDM	Dense Wavelength Division Multiplexing
EDB	Extended Data Base
FGI	Feature Group I (Internet Re-direct) (Ensemble product)
FTTB	Fiber To The Block or Fiber To The Building
FTTC	Fiber To The Curb
G.Lite	"Lite" ITU standard for ADSL transmission, interface being used on new
	PC's
HADM	Hybrid Add/Drop Multiplexer
HDSL	High bit rate Digital Subscriber Line
HWDCS	Hybrid Wide-band Digital Cross-connect System
IDLC	Integrated Digital Loop Carrier – direct connection of Remote Terminal
TD	into switch at the DS1 rate
IP KSD	Internet Protocol
ISP	Internet Service Provider
IXC	Inter-exchange Carrier
LS2012	Litespan 2012
LS200	Litespan 200
MLHG	Multi Line Hunt Group
NB NGDI 6	Narrow Band – 64 Kbps bandwidth
NGDLS	Next Generation Digital Loop Carrier – for Ameritech Wisconsin Litespan
OC-3	2000/2012 SONET *** ** * 155 M
OC-3 OC-12	SONET transport at 155 Mbps.
	SONET transport at 622Mbps.
OC-48	SONET transport at 2.5 Gbps.
OC-192	SONET transport at 10 Gbps.
OBM	Optical Broadband Multiplexer
OCD	Optical Concentration Device – ATM data switch in Central Office
OADM	Optical Add/Drop Multiplexer
ONU DC ELEV	Optical Network Unit

Carrier system supporting 24 POTS channels using HDSL technology Primary Rate ISDN, data rate = 1.544 Mbps.

PG FLEX

PRI

Acronyms (Continued)

RT	Remote Terminal
SCE	Service Creation Environment – software environment for the creation of
	new AIN services
SCP	Signal Control Point
SMS	Service Management System – provides for the operations, administration
	and provisioning of AIN services
SONET	Synchronized Optical NETwork
SS7	Signaling System 7
STP	Signal Transfer Point
STS-1	Synchronous Transport Signal level 1, basic SONET bldg. block = 51.84
	Mbps
TCPIP	TCP/IP – Transmission Control Protocol / Internet Protocol
TDM	Time Division Multiplexing
TR303&	Telcordia integrated switch interface for NGDLC systems
GR303	
UPSR	Uni-directional Path Switched Ring
VDSL	Very high bit rate Digital Subscriber Line
WDCS	Wide-band (3/1) Digital Cross-connect System
WDLC	Wireless Digital Loop Carrier
WDM	Wavelength Division Multiplexing
WLL	Wireless Local Loop

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TABLE OF DATA BY ACCOUNT CAPITAL INVESTMENT (\$)M

CONSTRUCTION DATA BY ACCOUNT:	ESTIMATE <u>2001</u>	ACTUAL 2000 ³	BUDGET <u>2000</u> ⁴
General Support Hardware Investments:			
Land & Buildings		14.5	12.2
Garage & Other Work Equipmen	t	6.3	4.5
Motor Vehicles		6.9	-
Office Equipment		0.04	-
General Purpose Computers		0.8	_1.1
Total	28	28.6	17.8
Central Office Hardware Investments:			
Switching		62.9	63.5
Operator Services		0.7	_
Circuits		127.1	133.0
Radio Systems	<u></u>	0.07	
Total	195	190.8	196.5
Information Orig./Term. Hardware Inves	tments:		
Public Term Equipment		0.3	1.2
Other Term Equipment		_0.1	_1.5
Total	2	0.4	2.7
Cable & Wire Facility Hardware Investm	nent:		
Total	120	103.8	93.0
Amortized Assets:			
Total	5	7.2	-
Total Capital Investments:	350.0	330.8	310.0

Note: Ameritech does not develop a detailed construction budget beyond the current year. The budget is driven by forecasts of customer demand developed in the fall of the prior year. Thus, if forecasted growth declines, so will the next budget. With the commitment to Project PRONTO, Ameritech Wisconsin could expect to have construction expenditures ranging from \$300M to \$350M in 2002 and 2003.

³ Source: December 2000 MR21

⁴ Source: 2000 Construction Plan, page 28

OCD List

COMPANY	MARKET AREA	STATE	WC CLLI	EST COMP DATE	IN SERVICE
AIT	WISCONSIN	WI	APPLWI01	11-2000	Y
AIT	WISCONSIN	WI	CDBGWI15	11-2000	Y
AIT	WISCONSIN	WI	DEPRWI11	11-2000	Y
AIT	WISCONSIN	WI	GNBYWI11	12-2000	Y
AIT	WISCONSIN	WI	GNBYWI12	11-2000	Y
AIT	WISCONSIN	WI	MDSNWI12	11-2000	Y
AIT	WISCONSIN	WI	MDSNWI13	11-2000	Y
AIT	WISCONSIN	WI	MDSNWI14	12-2000	Y
AIT	WISCONSIN	WI	MDSNWI16	11-2000	Y
AIT	WISCONSIN	WI	MILWWI10	11-2000	Y
AIT	WISCONSIN	WI	MILWWI12	12-2000	Y
AIT	WISCONSIN	WI	MILWWI16	11-2000	Y
AIT	WISCONSIN	WI	MILWWI23	11-2000	Y
AIT	WISCONSIN	WI	MILWWI25	11-2000	Y
AIT	WISCONSIN	WI	MILWWI30	11-2000	Y
AIT	WISCONSIN	WI	MILWWI42	11-2000	Y
AIT	WISCONSIN	WI	NENHWI11	11-2000	Y
AIT	WISCONSIN	WI	OSHKWI01	11-2000	Y
AIT	WISCONSIN	WI	PRSDWI11	12-2000	Y
AIT	WISCONSIN	WI	STRTWI11	12-2000	Y
AIT	WISCONSIN	WI	WKSHWI47	11-2000	Y

DTI Network Disclosure

RT Housing Legend	
CAB - Cabinet	
CEV - Controlled Environment Vault	Important: Turn-up is now being disclosed at a DA level instead of
HUT - Hut	an KT level. Therefore, Estimated Completion Dates are for a D.S. only and cannot be assumed for all DAs within a DSA (RT serving
N - New	area).
U - Upgrade	
R - Retrofit	

COMPANY	MARKET AREA	ST	WC CLLI	RT CLLI	RT HOUSING	DSA	DA	EST COMP DATE	DA COMPLETE	ACTUAL COMP DATE
AMERITECH	WISCONSIN	ĭĕ	DEPRW111	DEPRWIU0002	U-TUH	2107	2107R	03-2001	Y	03-2001
AMERITECH	WISCONSIN	MI	DEPRWI11	DEPRWIU0002	U-TUH	2107	2108R	03-2001	Y	03-2001
AMERITECH	WISCONSIN	MI	DEPRWI11	BLLVWIAEH00	U-TUH	2125	2125AR	03-2001	Y	03-2001
AMERITECH	WISCONSIN	₹	DEPRWI11	BLLVWIAEH00	HUT-U	2125	2125BR	04-2001	Y	
AMERITECH	WISCONSIN	<u>M</u>	CDBGW115	CDBGWIBU	CEV-N	1109	1109	01-2001	Y	01-2001
AMERITECH	WISCONSIN	ĭ ĭ	CDBGW115	CDBRWIAG	CEV-N	1123	1121	02-2001	Y	02-2001
AMERITECH	WISCONSIN	ĭ	CDBGW115	CDBRWIAG	CEV-N	1123	1123	02-2001	Y	02-2001
AMERITECH	WISCONSIN	ĭ	CDBGWI15	CDBRWIAG	CEV-N	1123	1125	02-2001	Y	02-2001
AMERITECH	WISCONSIN	<u>™</u>	CDBGW115	CDBRWIAG	CEV-N	1123	1126	02-2001	Y	02-2001
AMERITECH	WISCONSIN	ĭĕ	CDBGW115	CDBRWIAG	CEV-N	1123	1130	02-2001	Y	02-2001
AMERITECH	WISCONSIN	ĭ	CDBGW115	CDBGWIU0001	HUT-R	1131	1131	02-2001	Y	02-2001
AMERITECH	WISCONSIN	ĭ	CDBGW115	CDBGWIU0001	HUT-R	1131	1135	02-2001	Y	02-2001
AMERITECH	WISCONSIN	ĭĕ	CDBGWI15	GFTNWIU0001	HUT-R	1162	1162	03-2001	Y	03-2001
AMERITECH	WISCONSIN	M.	MDSNW112	MDSNWIU0003		1113	1113C	03-2001	Y	03-2001
AMERITECH	WISCONSIN	₹	MDSNWI12	MDSNWIU0003		1113	1113D	03-2001	Y	03-2001
AMERITECH	WISCONSIN	IM	MDSNWI12	MDSNWIU0009	U-TUH	1114	1114R	02-2001	Y	02-2001
AMERITECH	WISCONSIN	ĭ.	MDSNW112	MDSOWIPD	CAB-N	1134	1134	03-2001	Y	03-2001
AMERITECH	WISCONSIN	ĭ ĭ	MDSNWI12	BURKWIU3701	U-TUH	2108	2108A	12-2000	Y	12-2000
AMERITECH	WISCONSIN	ĭĕ	MDSNWI12	BURKWIU3701	HUT-U	2108	2108B	12-2000	Y	12-2000
AMERITECH	WISCONSIN	IM	MDSNWI12	BURKWIU3701	HUT-U	2108	2108C	12-2000	Y	12-2000
AMERITECH	WISCONSIN	WI	MDSNWI12	BURKWIU3701	U-TUH	2108	2108D	12-2000	Y	12-2000

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2134R	VII.71	2166	2167	2169	7100	2169	2169	2169 2169 2170 3105A	2169 2169 2170 3105 A 3113	2108 2169 2170 3105A 3113	2108 2169 2170 3105A 3113 3120	2108 2169 2170 3105A 3113 3120 3121	2108 2169 2170 3105A 3113 3120 3121 3121 3131	2108 2169 2170 3105A 3113 3120 3121 3121 3131	2108 2169 2170 3105A 3113 3120 3121 3121 3131 3131 3131 3132	2108 2169 2170 3105A 3113 3121 3121 3131 3131 3132 3133	2108 2169 2170 3105A 3113 3120 3121 3121 3131 3131 3133 3133	2108 2169 2170 3105A 3113 3120 3121 3131 3131 3132 3133 1118A	2108 2169 2170 3105A 3113 3121 3121 3131 3131 3132 3133 1118A 1118B	2169 2170 3105A 3113 3120 3121 3121 3131 3131 3132 3133 1118A 1118B	2108 2169 2170 3105A 3113 3120 3121 3131 3131 3132 3133 1118A 1118B 1118B	2108 2169 2170 3105A 3113 3120 3121 3131 3131 3131 3132 3133 1118B 1118B 1119 1122	2169 2170 3105A 3113 3120 3121 3121 3131 3131 3132 3133 1118A 1118B 1119 1119 11121 1121	2108 2169 2170 3105A 3113 3120 3121 3131 3131 3131 1118A 1118B 1118B 1119 1121 1121 1122 1123 1123 1208A	2108 2169 2170 3105A 3113 3121 3121 3131 3131 3131 1118B 11118B 1119 1122 1122 1123 1208A 1208B	2169 2170 3105A 3113 3120 3121 3121 3131 3131 3131 3131	2108 2169 2170 3105A 3113 3120 3121 3131 3131 3131 1118A 1118B 1118 1119 1121 1122 1123 1208A 1208B 4129	2169 2170 3105A 3113 3120 3121 3121 3131 3131 3131 3132 3133 1118A 1118B 1119 1112 1122 1123 1208B 4129 4130	2169 2169 2170 3105A 3113 3120 3121 3121 3131 3131 3132 3133 1118A 1118B 1119 11122 1123 1123 1123 1123 1123 112	2108 2169 2170 3105A 3113 3121 3121 3131 3131 3131 3131 313	2169 2170 3105A 3113 3120 3121 3121 3121 3131 3131 3131
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	U-TUH	U-TUH	U-TUH	HUT-U	L	n-IOH	+		+++																						
	BURKWIU4200	MDSNWIU3300	MDSNWIU3300	MDSNWIU3300	MDSNWIU3300	Company of the Compan	MDSNWIU3300	MDSNWIU3300 MDSNWIU4011	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU0612	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0612	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0612 MDSNWIU05522	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0522	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0622 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU612 MDSNWIU6522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU6522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5520	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5520 MDSNWIU5510 MDSNWIU5210 MDSNWIU5210 MDSNWIU5210 MDSNWIU5210 MDSNWIU5210 MDSNWIU510	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU612 MDSNWIU6522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5210 MDSNWIU4H00	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU612 MDSNWIU6522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5520 MDSNWIU5520 MDSNWIU5520 MDSNWIU5520 MDSNWIU5520 MDSNWIU5510 MDSNWIU5210	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU0612 MDSNWIU0612 MDSNWIU0612 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5520 MDSNWIU5210 MDSNWIU5210 MDSNWIU5210 MDSNWIU5210 MDSNWIU4H00 MDSNWIUAH00 MDSNWIUAH00 MDSNWIUAH00 MDSNWIUAH00 MDSNWIUAH00	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU612 MDSNWIU6522 MDSNWIU6522 MDSNWIU6522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5210 MDSNWIU5210 MDSNWIU5210 MDSNWIU400 MDSNWIU400 MDSNWIU400 MDSNWIU400 MDSNWIU400 MDSNWIU400 MDSNWIU400	MDSNWIU3300 MDSNWIU4011 BLDGVIAHH00 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU4011 MDSNWIU612 MDSNWIU612 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5522 MDSNWIU5210 MDSNWIU5210 MDSNWIU5210 MDSNWIU5210 MDSNWIU612 MDSNWIU612 MDSNWIU612 MDSNWIU612 MDSNWIU612 MDSNWIU612 MDSNWIU612 MDSNWIU612
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02-2001	01-2001	11-2000	11-2000	11-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	01-2001	01-2001	01-2001	01-2001	01-2001	03-2001	03-2001	03-2001	12-2000	01-2001	01-2001	01-2001	01-2001	02-2001	01-2001
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02-2001	01-2001	11-2000	11-2000	11-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	12-2000	01-2001	01-2001	01-2001	01-2001	01-2001	03-2001	03-2001	03-2001	12-2000	01-2001	01-2001	01-2001	01-2001	02-2001	01-2001
2350R	4220	2104A	2104B	2107	2112D	2112E	2306A	2306B	2306C	2306D	2306E	3106C	3107A	3107B	3108A	3108B	3109	3110A	3110B	3111	3112	3114	3116A	3119	3131	3160R	3209	3210	1166	1103	1112A
2350	4220	2104	2104	2104	2112	2112	2306	2306	2306	2306	2306	3106	3106	3106	3106	3106	3110	3110	3110	3110	3110	3119	3119	3119	3106	3160	3209	3209	1166	1103	1112
HUT-U	CAB-U	CAB-N	CAB-N	CAB-N	CAB-U	CAB-U	HUT-U	CEV-R	CEV-R	CEV-R	HUT-U	HUT-U	HUT-R	HUT-R		HUT-N	HUT-U														
BLGVWIU0001	MONNWIAXH00	MDSOWLH00	MDSOWLH00	MDSOWLH00	MDSOWIDMH00	MDSOWIDMH00	MDSNWIU0517	MDSNWIU0517	MDSNWIU0517	MDSNWIU0517	MDSNWIU0517	FTBGWIU5940	FTBGWIU5940	FTBGWIU5940	FTBGWIU5940	FTBGWIU5940	FTBGWIU2791	FTBGWIU2791	FTBGWIU2791	FTBGWIU2791	FTBGWIU2791	FTBGWIABH00	FTBGWIABH00	FTBGWIABH00	FTBGWIU5940	FTBGWIU5263	OKCKWIU1016	OKCKWIU1016	WWTSWIU2500	MEQNWIEJ	MEQNWIU4233
MDSNW114	MDSNWI14	╁	MDSNWII	MDSNWI16	MDSNWI16	MDSNWI16	-	MDSNW116	MDSNW116	MDSNWI16	MDSNWII	MDSNWII	MDSNWII	MDSNW116	MDSNWI16	MDSNWII	MDSNW116	MDSNWII	MDSNW116	MDSNW116	MILWWI10	MILWWI10	MILWW112	MILWWII	MILWWI16						
IM	I WI	IM I	IM I	IM N	I WI	I WI	IM I	IM 1	<u>™</u>	IM I	<u> </u>	<u> </u>	IM 1	<u>[</u>	IM I	IM .	I <u>M</u>	IM I	<u>M</u>	IM 1	<u>™</u>	∑	IM 7	IM 7	IM 1	<u>[</u>	<u>I</u>	I WI	IM I	IM N	IM 1
WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN
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01-2001	01-2001	01-2001	01-2001	01-2001	01-2001	03-2001	02-2001	01-2001	01-2001	01-2001	12-2000	12-2000	02-2001		02-2001	02-2001	02-2001	02-2001	01-2001	03-2001	03-2001	03-2001	03-2001	03-2001	12-2000	12-2000	02-2001	02-2001	02-2001	02-2001	01-2001	02-2001
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01-2001	01-2001	01-2001	01-2001	01-2001	01-2001	03-2001	02-2001	01-2001	01-2001	01-2001	12-2000	12-2000	02-2001	09-2001	02-2001	02-2001	02-2001	02-2001	01-2001	03-2001	03-2001	03-2001	03-2001	03-2001	12-2000	12-2000	02-2001	02-2001	02-2001	02-2001	01-2001	02-2001
1113	1118A	1118B	1136A	1136B	1137	1504	1511	1125	1127A	1127B	1133	2106	3307	3308	3310A	3310B	3310C	3310D	3311	1118	1136A	1136B	1136C	1137B	1145R	1146	3111A	3111B	3111C	3112	4021R	4109A
1112	1112	1112	1135	1135	1135	1504	1103	1150	1150	1150	1133	2106	3309	3309	3309	3309	3310	3309	3311	1136	1136	1136	1136	1136	1145	1145	3111	3111	3111	3111	4021	4109
HUT-U	HITT-II	HITT-111	N-TITH	NETH	N-1011	no i	N TIII	N-10H	HITT-R	HITT-R	CEV-II	CAB-U	HUT-R	HIJT-R	HUT-R	HUT-R	CEV-N	HITT-R		HUT-U	HUT-U	HUT-U	HUT-U	HUT-U	CAB-U	CAB-U	HUT-R	HUT-R	HUT-R	HUT-R	CAB-N	HUT-U
MEONWII 14233	MEQIAMIO4255	MEQNWIO+255	MEQNWIO4233	MEQNWICTIST ACCOUNTS	MEQNWICT191	MECINATOLISI	MEGNWIEG	MEQNWIEJ	MEQNWIO0724	MEQNWICO124	DVHI WIAB	GNEDWIDD	FKI NWIII1010	EKI NWIII1010	FKI NWII 11010	FKI.NWIU1010	FKI NWIFB	EKI NWII 11010	MII WWII15300	NENHWII 1136	NENHWII 1136	NENHWII 1136	NENHWIU1136	NENHWIU1136	MNSHWIDD	CICIMHSNM	NENHWIU0131	NENHWII 10131	NENHWII 10131	NENHWII 10131	MNSAWIAK	NENHWIU1200
717/1/11/17		MILWWIIO				MILWWI16	MILWWI16	MILWWI16	MILWW123	MILWWI23	MILWWIZS	MILW WILS	MILWWINS	SCHWW WAY	MILW WILL	MII WWI25	VIII WANTOS	SCHWAIN	MILW WILL	MILW WITE	NENHWIII	NENHWIII	–									NENHWI I
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INIOINOCOLI	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCOINSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCOINSIN	WISCONSIN	WISCONSIN	WISCOINSIN	WISCOINSIN	WISCONSIN	WISCONSIN	WISCONSIN	WISCOINSIN	WISCOINSIN	WISCOINSIN	WISCONSIN	WISCONSIN
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=	E	NENHWIU1200	HUT-U	4109	4109B	02-2001	>	02-2001
NENHWIII N	الس	NENHWIU1200	HUT-U	4109	4111	1007-70	I	02-2001
NENHWIII NEN	(A)	NENHWIU2401	HUT-U	4112	4112A	02-2001	X	1002-200
NENHWIII NEN	Z	NENHWIU2401	HUT-U	4112	4112B	02-2001	X ;	1002-200
=	Z	NENHWIU1200	HUT-U	4109	4117R	02-2001	,	02-2001
=	Z.	NENHWIU1795	HUT-U	4119	4119A	02-2001	× >	02-2001
_ _	(H)	NENHWIU1795	HUI-U	4119	4119B	01 2001	- 	01-2001
_ _ _	ייורד.	NENHWIU1902	HUI-U	4120	4120A	01-2001	,	01-2001
NENHWIII NE	L.	MNSHWIDB	HUT-10	4121	4121R	01-2001	Y	01-2001
 -		NNAHWIAB	CAB-U	4129	4129R	12-2000	Y	12-2000
01		OSHKWIDH	HUT-U	1115	1115A	12-2000	Y	12-2000
=		OSHKWIDH	HUT-U	1115	1115B	12-2000	¥	12-2000
OSHKWI01 O	10	OSHKWIDH	U-TUH	1115	1115C	12-2000	Y	12-2000
OSHKWI01 O		OSHKWIDH	HUT-U	1115	1115D	12-2000	Y	12-2000
OSHKWI01 C	٠,	OSHKWIDH	HUT-U	1115	1117A	12-2000	¥	12-2000
OSHKWI01 OS		OSHKWIU1120	HUT-U	1120	1118	12-2000	Y	12-2000
OSHKWI01 OS		OSHKWIU1120	HUT-U	1120	1120A	12-2000	Y	12-2000
OSHKWI01 OS	(A)	OSHKWIU1120	HUT-U	1120	1120B	12-2000	Y	12-2000
OSHKWI01 OS		OSHKWIU1120	HUT-U	1120	1121	12-2000	Y	12-2000
OSHKWI01 OS		OSHKWIU0003	HUT-U	1122	1122AR	12-2000	Ą	12-2000
_	:	OSHKWIU0003	HUT-U	1122	1122BR	12-2000	Y	12-2000
OSHKWI01 C	- ""	OSHKWIU0004	HUT-U	1134	1134R	12-2000	Y	12-2000
OSHKW101	1	OSHSWIAC	CAB-U	1138	1138R	11-2000	J.	11-2000
Ĺ	ń	OSHKWIU0001	HUT-U	3211	3126R	12-2000	Y	12-2000
OSHKWI01 (íń	OSHKWIU0001	HUT-U	3211	3128R	12-2000	Υ	12-2000
OSHKWI01 A		ALGMWIU0001	HUT-U	3189	3189	02-2001	Y	02-2001
F	1	OMROWIU0001	U-TUH	3190	3190R	03-2001	Y	03-2001
OSHKWI01 OS		OSHKWIU0001	HUT-U	3211	3211R	12-2000	¥	12-2000
47		WKSHWIU0219	HUT-U	1117	11115	01-2001	Y	01-2001
WKSHWI47 W		WKSHWIU0219	HUT-U	1117	1116	12-2000	Y	12-2000
WKSHWI47	ı 🔀	WKSHWIU0219	HUT-U	1117	1117A	12-2000	Y	12-2000
WKSHWI47	۱	0100111/11110/1/11	HITT-II	11117	1117B	01-2001	>	01-2001

AMERICAL WI	100000			71700111011)	the second secon	San	-
M	WISCONSIN	┰	WKSHWI47	WKSHWIGWH00	HUT-R	1153	1153	02-2001	Y	01-2001
X	WISCONSIN	- 	WKSHWI47	WKSHWIGWH00	HUT-R	1153	1154A	02-2001	Y	01-2001
Ĭ	WISCONSIN	+-	WKSHW147	WKSHWIGWH00	HUT-R	1153	1162	02-2001	Y	01-2001
N N	WISCONSIN	WI	WKSHWI47	WKSAWIAF	CEV-N	2116	2116A	02-2001	Y	02-2001
AMERITECH WI	WISCONSIN	ΙM	WKSHWI47	WKSAWIAF	CEV-N	2116	2116B	02-2001	Y	02-2001
╁	WISCONSIN	ΙM	WKSHWI47	WKSAWIAF	CEV-N	2116	2116C	02-2001	Y	02-2001
╁	WISCONSIN	WI	WKSHWI47	WKSHWIU0006	HUT-R	2121	2120	03-2001	Y	03-2001
╀	WISCONSIN	ĭ≽	WKSHWI47	WKSHWIU0006	HUT-R	2121	2121	03-2001	Y	03-2001
╀	WISCONSIN	ΙM	WKSHWI47	WKSHWIU0006	HUT-R	2121	2122	03-2001	Y	03-2001
╁	WISCONSIN	ĭĕ	WKSHWI47	NWBLWIHR	CAB-U	2145	2145	01-2001	Y	01-2001
╀	WISCONSIN	ΙM	WKSHW147	NWBLWIHR	CAB-U	2145	2146	01-2001	Y	01-2001
╁	WISCONSIN	Ī	WKSHWI47	WKSHWIU0146	HUT-U	3143	3143A	01-2001	Y	01-2001
╀	WISCONSIN	Ĭ≅	WKSHW147	WKSHWIU0146	HUT-U	3143	3143B	01-2001	Y	01-2001
+	WISCONSIN	Ĭ	WKSHWI47	WKSHWIU0146	HUT-U	3143	3143C	01-2001	Y	01-2001
╁	WISCONSIN	×	WKSHWI47	WKSHWIU0146	HUT-U	3143	3143D	01-2001	Y	01-2001
╁	WISCONSIN	M	WKSHWI47	WKSHWIU0152	HUT-R	3147	3147	12-2000	Y	12-2000
╀	WISCONSIN	ĭ≨	WKSHW147	WKSHWIU0152	HUT-R	3147	3148	12-2000	Y	12-2000
╀	WISCONSIN	M	WKSHW147	WKSHWIU0152	HUT-R	3147	3152	12-2000	Y	12-2000
╁	WISCONSIN	ΙM	WKSHWI47	WKSAWIAB	HUT-R	3201	3201	12-2000	Y	12-2000
╀	WISCONSIN	ΙM	WKSHWI47	WKSHWIU0151	HUT-R	3203	3203	01-2001	Y	01-2001
十	WISCONSIN	IM	WKSHWI47	WKSHWIU0005	CEV-U	4125	4113	11-2000	Y	11-2000
╁	WISCONSIN	ΙM	WKSHWI47	WKSHWIU0005	CEV-U	4125	4114	11-2000	Y	11-2000
╁	WISCONSIN	ĭ⊼	WKSHWI47	PEWTWIARH00	HUT-R	4148	4121	12-2000	Y	12-2000
+	WISCONSIN	M	WKSHWI47	WKSHWIU0005	CEV-U	4125	4125	11-2000	Y	11-2000
╁	WISCONSIN	M	WKSHW147	PEWTWIARH00	HUT-R	4148	4148A	12-2000	Y	12-2000
+	WISCONSIN	ΙM	WKSHWI47	PEWTWIARH00	HUT-R	4148	4148B	12-2000	Y	12-2000
╁	WISCONSIN	ΙM	WKSHWI47	WKSHWIU0005	CEV-U	4125	4152A	11-2000	Y	11-2000
\vdash	WISCONSIN	MI	WKSHWI47	WKSHWIU0005	CEV-U	4125	4152B	11-2000	Y	11-2000
\vdash	WISCONSIN	IM	WKSHWI47	WKSHWIU0005	CEV-U	4125	4153	11-2000	Y	11-2000
╁	WISCONSIN	MI	APPLWI01	APPLWIJZ	CAB-U	1123	1120	11-2000	Y	12-2000
<u> </u>	WISCONSIN	ΙM	APPLWI01	APPLWIJZ	CAB-U	1123	1123	11-2000	Y	11-2000
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AMFRITECH	ZISZCCSIM -	ĭ ĭ	APPLWI01	BLCKWIAF	CAD-IN	1134	11741	7		0000
I TOTAL DELIVERY	WISCONISTM	1	APPI WINI	FRDMWIAB	CAB-U	1157	1157R	12-2000	Y	12-2000
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AMERITECH	MISCONSIN	<u>₹</u>	APPLWIUI	AFFLWIII	N-1011	2021		1000	>	03_2001
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A A STORT THE CALL	MINIOCOMETA	Į,	APPI WIO1	GDCTWI114165	HUT-R	4165	4165C	02-2001	Ĭ	1007-70
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